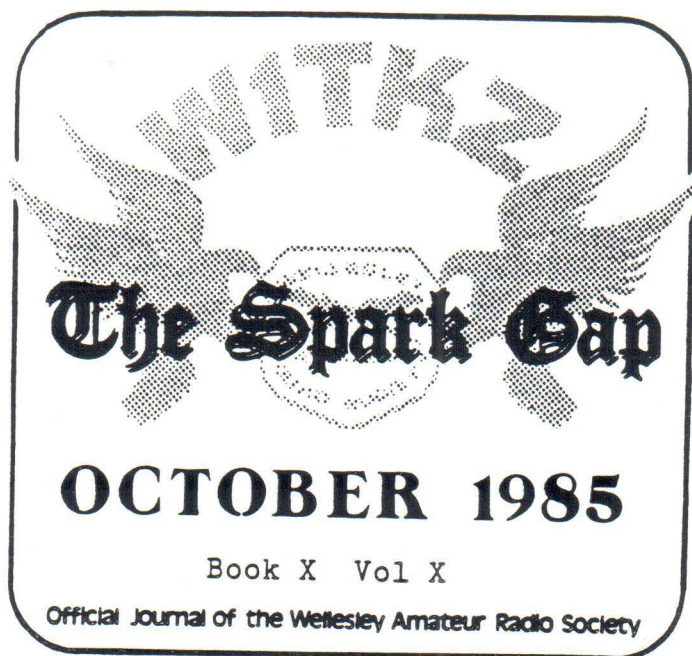




Dues Dues Dues...

With the start of the new club year it is time to pay your dues. They are slightly increased to \$10.00 this year. The dues for additional family members remains unchanged at \$2.00 each.

You may pay your dues during one of the meetings this month or mail them to the club treasurer, C.J. McDonald, WB1BUM, 48 Hale Street, Newton, Mass. 02164.

ANNOUNCEMENT

At our second meeting of the month on October 17, 1985, the subject will be QRP---low power---communications, with associated matters, such as portable operation, net operation, contesting, home construction, QRP Amateur Radio organizations, etc.

The subject will be introduced by Thomas Burton, KX1H, and the principal speaker will be James M. Fitton, W1MFR, of Lawrence, who has had much

experience in this interesting field and now runs a net at 8:00 a.m. local time on 7.040 MHz on Saturday mornings. There is scheduled an article on QRP in QST for October, which could serve to introduce the subject to interested members.

President's Message

by Tom Kinahan, N1CPE

This month I have just a little news on past and future events.

We participated in another successful September VHF contest on the 14th and 15th. See the article elsewhere and check QST for the results. I also want to thank Mort Cohan, KALIU, and Kathy Pate, KALIYR, for an excellent program on the recent "Ham In Space" mission on the nineteenth.

In the list of rapidly upcoming events, we have the following:

On October 27, we've been asked to do some public safety communications for an event called the "Monster Dash". This should take a few hours of your time and is run intown Boston around the City Hall area. We need operators with 2 meter handhelds. If you want to help let me or another officer know. I also hope to see many of you during the Simulated Emergency Test on the second of October.

And while we're all at it, lets think about next months Sweepstakes.

73 from N1CPE.

WARS NET

Just a reminder that weekly running of the Wellesley Amateur Radio Society net continues every Sunday night at 7:00 p.m. on 147.63/03. For the latest club news and a chance to keep in touch with other club members, don't forget to check in each Sunday.

MEETINGS THIS MONTH:

October 3, 1985, at 7:30 p.m.
October 17, 1985, at 7:30 p.m.
211 Washington St., Wellesley

Auctions / Flea Markets

October 5: New England's biggest ham radio flea market, the Hoss Traders will hold its third annual swapfest at the Deerfield fairgrounds in Deerfield, N.H. Friday night camping starts at 4:00 p.m. Admission is \$2 for buyers or sellers. Profits benefit the Shriner's Burn Center in Boston. Food is available. Talk-in on 146.52 direct or 146.40/147.00.

October 27: The Framingham ARA will hold a flea market and conduct Amateur Radio exams at the Framingham Civic League Building, 214 Concord Street (Route 126), Framingham. Admission is \$2, doors open at 10:00 a.m. Tables are \$10 in advance with set-up starting at 8:30. For more information phone Jon at 877-7166 or write Framingham ARA, 37 Lyman Road, Framingham, MA 01701.

Hamnews

There will be another ham in space mission this month when the Federal Republic of Germany will have the first scientific manned space mission of its own: the D1 mission. Astronauts Ernst Messerschmid, DG2KM, and Reinhard Furrer, DD6CF, will operate station DPOSL from the Spacelab aboard the shuttle Columbia.

During the seven day mission operation may take place on up to five days. In addition to 2-way contacts DPOSL will operate as a transmit only beacon and as a recording beacon with an automatic CQ followed by a listening period in which everything heard will be tape recorded.

The frequencies to be used are:

Channel	Downlink	Uplink
0	145.450	437.125
1	145.475	437.175
2	145.550	437.225
3	145.575	437.275
4	---	437.325
5	---	437.375

The normal operating pair will be 3/3 (downlink channel 3/uplink channel 3).

ARRL Letter, September 12, 198

Hearabouts....

During the month of October the Foxboro Company Amateur Radio Club will be awarding certificates to any station that works ten of its members via its club repeater on 147.975/375. Contacts must be confirmed by sending a log sheet showing the ten members and the dates contacted.

A special DX certificate will also be awarded to the station located the furthest number of air miles from the Foxboro repeater who works at least one of its members. A QSL will be required for this award.

Send log sheets and SASE for certificate to:

Frank S. Jasinski, W1XA
42 Saddleback Hill Road
Bellingham, MA 02019

OFFICERS

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Tom Kinahan, N1CPE, 653-0641

VICE PRESIDENT:

Rita Baker, N1DDI, 481-0863

RECORDING SECRETARY:

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EDUCATION CHAIRMAN:

STATION MANAGER:

Bob Drapeau, KT1K, 883-1132

REPEATER COMMITTEE:

Tom Kinahan, N1CPE, 653-0641

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR:

NELS ANDERSON, KIUR
92 BISHOP DRIVE
FRAMINGHAM, MASS. 01701
872-5259

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, FCC RULES AND REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES TO THE EDITOR. ITEMS PRINTED IN THE "SPARK GAP" MAY BE REPRINTED BY OTHER AMATEUR RADIO PUBLICATIONS PROVIDED THE AUTHOR AND THE "SPARK GAP" ARE GIVEN CREDIT.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8.00. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
211 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



Minutes

Meeting of September 5, 1985:

The meeting was opened at 7:43 p.m. by President Tom Kinahan, N1CPE.

The Treasurer's report was given and the 1985/86 budget presented. After discussion, the budget was passed. As a result of the new budget, dues are raised to \$10.

Art Thompson, KA1ENP, gave a report on upcoming meeting programs.

Future education plans were discussed. There is still no volunteer to run the education programs.

Bob Drapeau, K1TK, discussed possible SET plans, including operating in conjunction with an emergency preparedness event Babson College will hold.

Mort Cohan, KA1IU, is looking for volunteers who operate HF to help test

an MUF computer program.

The upcoming VHF contest was discussed.

The meeting was closed at 8:39 p.m.

VHF CONTEST

by Tom Kinahan, N1CPE

This years September VHF contest was marked by some calamities but no tremendous band conditions. Surprisingly six and two meters, 220 MHz, 432 MHz, and 1296 MHz were all set up and operating as the contest began at 2:00 p.m. local time. I could detect no amazing band conditions as had been the case in last years September test when we were working southern Florida on 2 meters. Nonetheless a hearty crew of first timers KA1MZJ, G3VVH, KA1LDV led by veterans W1GCI, WA2TIF, K1TK, N1CPE, WA1ZLQ, and WB1BUM with additional help by W1ECE, W1LJO and Steve Lynes, beared the sub-freezing nighttime temperatures and the brilliant daytime sunshine to produce a very successful contest.

Six meters was thought to be pretty dead after the initial beginning of contest rush. Two meters was its usual self with about 400 contacts. 220 MHz and 432 MHz were average according to our main ops here W1GCI and WA2TIF. 1296 MHz was again very surprising, we set a record for our operation from Mt. Equinox of 36 contacts here. 2304 MHz was a little disappointing with 2 contacts and 2040 Gigahertz we had 3 contacts, about average for this band.

Again Mt. Equinox claimed another casualty, G3VVH's car having made the 200 mile trip to the mountain and up and down the 5 mile mountain road 3 times Saturday, decided it was time for a rest Sunday morning. It was towed away to have its transmission replaced. This left G3VVH and KA1MZJ + XYL's needing a ride back home which was arranged in short order.

Thanks to all who participated and I hope to see you all again on the hill in June.

CHUCKLE KORNLER

From W6SD Carrier, via ARNS

Did you know that changes in the 1984 National Electrical Code make it more "technically correct" to use the term volt-ampere in place of watt? It is interesting to note that a word has been displaced by a short definition of it since $1 \text{ watt} = 1 \text{ volt} \times 1 \text{ amp}$. Perhaps we shall soon be told it is more technically correct to avoid the use of "4" and substitute "2 x 2."

About a decade ago, technology informed us that cycle was out, even though it nicely described a thing it named. Henceforth, we were told, it was to be called "hertz," so we now rejoice in such words as kilohertz and megahertz. The reason adduced was that other terms describing electrical units, such as ampere, volt, farad, ohm and henry were named for physicists (so, incidentally was the watt). Therefore, call a cycle a hertz.

Not one of these changes strikes me as a change for the better. Perhaps it's simply a question of what one is accustomed to. I grew up with kilocycles and watts. All my radios, except the one I bought last year say kil and kilocycles on their dials. The newest, a fancy one with two speakers and cassette player-recorder, says kHz. That's right, little k, big H, small z. Kilohertz, or maybe kilohertz, I have a feeling that kilocycle will not die quite so easily as the kilohertzians might wish.

I don't suppose anyone under the age of 55 could possibly remember a show called "Uncle Ezra." Uncle Ezra used to inform us that he was broadcasting from his "little 25-watter here in Rosedale." It has been a great many years since Uncle Ezra told us that, so it's not unlikely that he said it was a 75-watter or maybe a 200-watter. My memory gets untied occasionally. The point is that he was referring to the wattage of his little transmitter. But can you im-

agine the noise all those radio dials would have made sending Uncle Ezra into oblivion if he'd tried to say "my little 25 volt-ampere here in Rosedale."

I'll go on saying that electricians and sociologists and bureaucrats and psychologists and Pentagonists and everyone else in a position to do an official messing up of our language would take a 10 minute break to ask himself, "Will this change benefit mankind?" At all? The answer in virtually every instance should be a clear "No," but on this point "I incline to gloom."

Hamnews

The Heath Company has announced a price reduction of its HD-4040 Packet Radio TNC kit from \$299.95 to \$249.95. The price reduction came as a result of cost savings to Heath, principally due to quantity buys made in RAM and EPROM chips. The company has indicated its gratitude to Radio Amateurs for the overwhelming success of the HD-4040 TNC and apologizes to those who have had to wait for back orders.

Westlink Report, September 6, 1985

The 902-928 MHz band became available to all Amateur Radio operators holding Technician or higher licenses as September 28. Use of the band is on a secondary, non-interference basis; we must not interfere with and must accept interference from the Fixed and Radiolocation Services, and the industrial, medical and scientific (ISM) devices there.

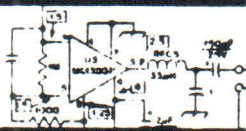
ARRL Letter, September 12, 1985

Packet radio literally tied up the Tucson, Arizona telephone system for the better part of August 19. That was the date that the Tucson Amateur Packet Radio Corporation's TNC-2 packet TNC went on sale, and the demand far exceeded what anyone in the TAPR organization had expected. According to Harold Price, NK6K, the situation was almost beyond belief.

"We announced these TNCs for sale," said Price, "and so far we've crashed the phone system in Tucson three times today. We've gotten a call from the telephone company that says all the incoming lines are jammed....Amateur Radio certainly isn't dead. In fact, some segments are really taking off." The TAPR TNC-2 is available from TAPR for \$185 plus \$10 shipping. Orders can be placed by calling 602-746-1166. Thanks NK6K.

Westlink Report, September 6, 1985

Tek Tok



by W9TAL

Hamfesters RC, Oak Lawn, Ill.

via ARNS

Nothing which electricity does has added to your comfort and mine so much as the light we see after darkness has set in. We are so accustomed to electric lights that we never stop to think what our world would be like without them. Most scientists agree that the invention of the incandescent lamp was one of the worlds greatest achievements. Before 1879, the only lights available used fuel and flame. Of course, the man who perfected our electric light bulbs was Thomas Alva Edison.

He worked long and hard perfecting the material for use as a filament, with innumerable failures. Finally, he came up with the use of bamboo, properly carbonized, and this proved to be quite successful. Indeed, as late as 1898, this material was still in use in replacement lamps.

Scientists soon felt, however, that there had to be some metal that would be better than the carbonized filaments so around 1903, Doctor Auer von Welsbach, the German scientist who had invented the gas mantle, produced a lamp with an osmium filament. This worked very well, and subsequently other scientists used tantalum and

tungsten.

Tungsten turned out to be the best filament material for a long time. It was in 1907 that tungsten lamps were first sold commercially. Additional lamp life was obtained in later tests by replacing the high vacuum with a mixture of 86% argon and 14% nitrogen.

Since the tungsten lamp was developed, many other lamps have hit the commercial market, such as photoflash lamps, introduced in 1930. They appeared to look like a regular light bulb but actually used aluminum foil or shredded wire in a pure oxygen atmosphere. Life expectancy was a few hundredths of a second.

Neon lamps make up most of our commercial signs nowadays, and consist of glass tubing with a metal electrode at each end. The glass is formed into various letters to denote the product. A small amount of neon is introduced and together with a small amount of air, is sealed off at the end of the tubing.

A high voltage is used to fire this lamp and if neon is used alone it will give a brilliant red light. By introducing a bit of mercury during the manufacturing process, a blue light will result. By using uranium glass with mercury and neon, the result will be a green glow. There are at least 12 color combinations available with the proper gasses, vapors and glass.

The sunshine lamps contain a tungsten filament together with a pool of mercury. The bulb is usually hung downward, screwbase up, then as power is applied the filament will light, and the heat will vaporize the mercury which then arcs between two electrodes holding the filament. The glowing mercury produces a visual light and also sufficient ultra-violet light to produce a mild sunburn in five or ten minutes on un-tanned skin.

Sodium lights and fluorescent lamps make up the balance of commercial and home lighting.

In just 100 years, lighting America's homes and factories has made great strides.



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